

TRANSLATION

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>D-03008 PCT</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/DE2004/002716</b>	International filing date ( <i>day/month/year</i> ) <b>10.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>10.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>C11D3/37, D06P5/08</b>		
Applicant <b>SASOL GERMANY GMBH</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>9</u> sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s))  _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-4, 7, 8, 11-16 as originally filed/furnished
- pages\* 5, 6, 9, 10 received by this Authority on 24.12.2005 with letter of 21.12.2005
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-20 received by this Authority on 24.12.2005 with letter of 21.12.2005
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																					
1. Statement	<table><tbody><tr><td rowspan="2">Novelty (N)</td><td>Claims</td><td>1-19</td><td>YES</td></tr><tr><td>Claims</td><td>20</td><td>NO</td></tr><tr><td rowspan="2">Inventive step (IS)</td><td>Claims</td><td>1-19</td><td>YES</td></tr><tr><td>Claims</td><td>20</td><td>NO</td></tr><tr><td rowspan="2">Industrial applicability (IA)</td><td>Claims</td><td>1-20</td><td>YES</td></tr><tr><td>Claims</td><td></td><td>NO</td></tr></tbody></table>	Novelty (N)	Claims	1-19	YES	Claims	20	NO	Inventive step (IS)	Claims	1-19	YES	Claims	20	NO	Industrial applicability (IA)	Claims	1-20	YES	Claims		NO
Novelty (N)	Claims		1-19	YES																		
	Claims	20	NO																			
Inventive step (IS)	Claims	1-19	YES																			
	Claims	20	NO																			
Industrial applicability (IA)	Claims	1-20	YES																			
	Claims		NO																			
2. Citations and explanations (Rule 70.7)	<p>1. Reference is made to the following documents:</p> <p>D1: WO-A-99/67350</p> <p>D2: JP-A-2002/142760 (WPI)</p> <p>D3: US-A-5 486 207</p> <p>2. Document D1 (see the claims and examples, especially Examples 8 and 9, pages 19 and 22) describes water-soluble polyesters containing glycols, terephthalic acid derivative, more than 20% isophthalic acid and oxyalkylated polyol such as polyethylene glycol (PEG), ethoxylated glycerol or trimethylol propane or pentaerythritol, for reducing dye redeposition in a dye removal process for dyed denim. The molecular weight is not specified. D1 does not disclose terephthalic acid in a proportion of more than 90% or PEG with a molecular weight between 2000 and 8000 as in claim 1 of the present application. D1 also does not describe alkoxylated C<sub>1-18</sub> alcohols as in claim 4 or the formula claimed in claim 12.</p> <p>Document D2 describes water-soluble polyesters with a molecular weight between 500 and 100000 containing</p>																					

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>between 0 and 10 C<sub>2-10</sub> alkylene glycol units and between 1 and 10 terephthalic acid C<sub>2-10</sub> alkylene glycol units in a dye removal process for dyed denim. D2 does not disclose PEG with a molecular weight between 2000 and 8000 as in claim 1 of the present application. D2 also does not describe alkoxyated C<sub>1-18</sub> alcohols as in claim 4 or the formula claimed in claim 12 where n is between 7 and 115.</p> <p>Document D3 (see the examples and claims) describes water-soluble polyesters containing 2-hydroxyethane sulphonate, terephthalic acid methyl ester, isophthalate, ethylene glycol and propylene glycol. The reaction produces polyetherols with at least 6 oxygen atoms, and the polyester has a molecular weight between 500 and 8000. The product is used to remove dye from dyed cotton fabrics. D3 does not disclose PEG with a molecular weight between 2000 and 8000 as in claim 1 of the present application. D3 also does not describe alkoxyated C<sub>1-18</sub> alcohols as in claim 4 or the formula claimed in claim 12 where n is between 7 and 115. There is also no mention in D3 of indigo-dyed cotton as in claims 1 and 12.</p> <p>The subject matter of claims 1, 4, 12 and 19 is therefore novel over documents D1, D2 and D3.</p> <p>3. The fact that a product is produced by a novel process does not make the product itself novel. The subject matter of claim 20 (an indigo-dyed cotton treated as per claims 1 to 13 and/or claims 16 to 18) therefore lacks novelty, at least in relation to D1</p>

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>and D2. Hence the requirement of PCT Article 33(2) is not met.</p>
4.	<p>The problem addressed by the present invention is that of how to reduce dye redeposition in a dye removal process for dyed fabrics, namely stonewashing. No technical effect is demonstrated. The examples describe polyester synthesis processes.</p> <p>The same problem is described in D1. D2 also relates to stonewashing, whereas D3 relates to the prevention of fading. The subject matter of claims 1, 4 and 12 is thus an alternative to the polyesters used for the same purpose in D1 and D2. The distinguishing features referred to in point 2 above are neither known from nor suggested by D1 or D2. The subject matter of claims 1, 4, 12 and 19 is therefore inventive (PCT Article 33(3)).</p>
5.	<p>Independent claims 1, 4 and 12 fail to meet the requirement of unity of invention.</p> <p>(a) Claims 1, 4 and 12 specify various types of polyester.</p> <p>(b) Claims 1 and 12 specify indigo-dyed cotton, which is not necessary in claim 4. Claim 4 relates to dyed fabric containing cotton fibres.</p> <p>(c) The same problem is described in D1 and D2.</p> <p>The requirements of PCT Rule 13.1 and 13.2 are therefore not met.</p>
6.	<p>Claim 12 appears to include all the features of claim 1</p>

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and should therefore not be formulated as if it were dependent on claim 1 (PCT Rule 6.4).

7. Claim 7 can only be dependent on claims 4 to 6; claim 9 can only be dependent on claims 4 to 8; and claim 17 can only be dependent on claims 8, 10 and 11. The requirements of PCT Article 6 are therefore not met.